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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/803,393   | 03/18/2004  | Seiji Toyoda         | 041309/275931       | 5512             |
| 826  | 7590        | 08/01/2006           | EXAMINER            |                  |
| ALSTON & BIRD LLP<br>BANK OF AMERICA PLAZA<br>101 SOUTH TRYON STREET, SUITE 4000<br>CHARLOTTE, NC 28280-4000 |             |                      | LEE, SIN J          |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 1752                |                  |

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/803,393

Applicant(s)

TOYODA ET AL.

Examiner

Sin J. Lee

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/409,078.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicants canceled claims 1-14, 16 and 18-30.
2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

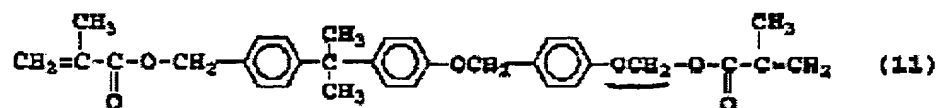
### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaru et al (JP 10-148729 and its machine-assisted English translation provided by JPO).

In Example 7, Tomaru teaches a solution containing the following acrylic oligomer and a photopolymerization initiator:



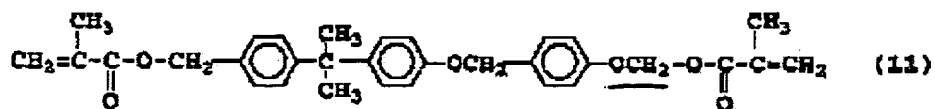
Tomaru obtains an optical waveguide by the same method as in his Example 1 (Tomaru obtains an optical waveguide pattern by forming a film from the solution, exposing the film to UV light through a mask, and developing away the unexposed portion with isopropanol solution and thus forming a ridge pattern of a configuration). Tomaru teaches the equivalence of the  $\text{-OCH}_2\text{-}$  moiety shown above (as underlined) and  $\text{-CH}_2\text{-}$  moiety - see [0026]-[0027] of machine-translation in which Tomaru teaches that  $X_3$  can be an alkyl group or an alkyl ether radical. Therefore, it would have been obvious to one skilled in the art to replace the (underlined)  $\text{-OCH}_2\text{-}$  moiety with a  $\text{-CH}_2\text{-}$  moiety with a reasonable expectation of obtaining ridge pattern of the core part of polymer optical waveguide. The resulting oligomer teaches present oligomer of formula (5a).

Therefore, Tomaru's teaching render obvious present invention of claims 15 and 17.

5. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomaru et al (JP 10-253845 and its machine-assisted English translation provided by JPO).

In [0072]-[0074], Tomaru teaches a solution containing the following acrylic oligomer and a photopolymerization initiator:

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Tomaru obtains an optical waveguide pattern by forming a film from the solution, exposing the film to UV light through a mask, and developing away the unexposed portion with isopropanol solution and thus forming a ridge pattern of a configuration (see [0040]-[0046]). Tomaru teaches the equivalence of the  $-\text{OCH}_2-$  moiety shown above (as underlined) and  $-\text{CH}_2-$  moiety - see [0028]-[0029] of machine-translation in which Tomaru teaches that  $X_3$  can be an alkyl group or an alkyl ether radical. Therefore, it would have been obvious to one skilled in the art to replace the (underlined)  $-\text{OCH}_2-$  moiety with a  $-\text{CH}_2-$  moiety with a reasonable expectation of obtaining a high polymer light waveguide pattern for aperture converting. The resulting oligomer teaches present oligomer of formula (5a). Therefore, Tomaru's teaching render obvious present invention of claims 15 and 17.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

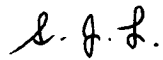
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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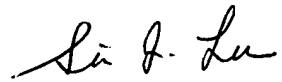
published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee  
July 22, 2006



**SIN LEE**  
**PRIMARY EXAMINER**